



For Immediate Release  
September 9, 2005

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## **First Irradiated Tritium Rods Arrive At SRS** **NNSA Readiness Campaign Reaches Milestone**

WASHINGTON, D.C. – The National Nuclear Security Administration (NNSA) has moved one step closer to restoring an important capability to our nation's nuclear defense. This major step was achieved when South Carolina's Savannah River Site (SRS) recently received the first shipment of tritium in the form of irradiated Tritium Producing Burnable Absorber Rods (TPBARs) from the Tennessee Valley Authority's (TVA) Watts Bar nuclear reactor.

The rods are a product of NNSA's nuclear weapons Readiness Campaign, and contain the first tritium produced by the United States in over 15 years. To perform as designed, every U.S. nuclear weapon uses tritium; however that tritium must be replaced after a certain period of time.

"Tritium is a vital component of the nation's nuclear weapons stockpile," said Acting Deputy Administrator for Defense Programs Thomas P. D'Agostino. "This milestone is an important element to maintaining the safety, security and reliability of the nation's nuclear weapons stockpile."

Tritium is a radioactive isotope of the element hydrogen. Tritium decays at about five percent per year and therefore must be periodically replaced in nuclear weapons. Historically, tritium was produced at SRS in its five nuclear production reactors. The last of the reactors was shut down in 1992 and the United States has been without a new source of tritium ever since.

Since that time, NNSA has relied completely on recycling tritium to support the nuclear weapons stockpile. The need for a new tritium supply was recognized and the Department of Energy decided to pursue the production of tritium in a commercial nuclear reactor (TVA's Watts Bar) and construction of a modern new Tritium Extraction Facility at SRS. With construction now complete, the TEF, a \$500 million state-of-the-art facility, is undergoing startup testing and operator training with initial operations to begin in 2007.

The TPBARs will be temporarily and safely stored at the SRS's K-Area until startup testing of the new Tritium Extraction Facility is completed next year.

Established by Congress in 2000, NNSA is a semi-autonomous agency within the U.S. Department of Energy responsible for enhancing national security through the military application of nuclear energy. NNSA maintains and enhances the safety, security, reliability and performance of the U.S. nuclear weapons stockpile without nuclear testing; works to reduce global danger from weapons of mass destruction; provides the U.S. Navy with safe and effective nuclear propulsion; and responds to nuclear and radiological emergencies in the U.S. and abroad.

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